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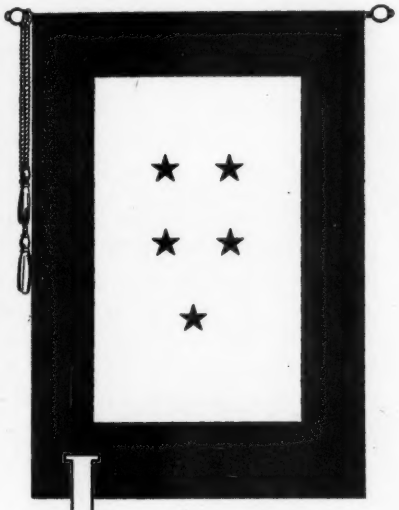

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WALTER C. MONROE President and Editor
KINZIE MILLER Vice President

V. W. HEINZERLING, Manager California Oil World News Service and California Oil World Reference Edition

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June 25th, 1943

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Administrative Highlights •

California Drilling Requirements To Be Surveyed

In a letter to all California operators, E. E. Pyles, chairman of District 5 production committee of the Petroleum Administration for War, outlined a program under which estimates and forecasts for materials needed to drill new wells in California will be obtained. The survey, to be conducted by the field engineering committees in each field working under the direction of the district chairman, will include an estimate of the number of wells to be drilled each quarter for four quarters in advance, and a projection of total production based on the declined rates of present wells, plus additions from new developments.

After the estimates have been made, the field engineering committees will review them at the end of each calendar quarter and the forecasts will then be revised and extended one additional quarter into the future. The estimates will be made by pools, following the production committee's pool classification, and later assembled into field, district and state pools.

After the field engineering committees have forecast the development expected to occur in each pool, it will then estimate the amounts of material and the numbers of the principal essential fabricated items to be required for such development and for the maintenance of present producing wells.

Estimates by individual companies will not appear at any place in these figures, Mr. Pyles said. It will, however, be necessary for the field engineering committees to obtain from the operators in each pool information concerning their probable development programs and consequent material requirements in order to make the forecast for the pool. It will be understood, Mr. Pyles said, that the figures furnished by the operators will constitute estimates based upon the operator's experience, judgment, and knowledge of his company's policy. It will be further understood that such estimates are in no way binding upon the operator either as to his proposed development program or as to his material requirements, Mr. Pyles added.

This forecast, it was emphasized, constitutes one of the most necessary undertakings now before the California petroleum industry. The speed with which it may be completed and the accuracy with which it may be made and maintained is dependent entirely upon the degree of cooperation offered field engineering committees by the operating companies, Mr. Pyles said.

Conservation Committee Elects Officers

The Conservation Committee of California Oil Producers held their annual election of officers and standing subcommittees in the new committees' organization meeting held on June 3, 1943. The new committee will hold office for the year beginning June 1, 1943.

Warner Clark, Standard Oil Company of California, was named chairman of the Conservation Committee of California Oil Producers. Mr. Clark succeeds R. P. Huggins, Western Gulf Oil Company.

F. M. Ziegler, Kern Oil Company Limited, was elected first vice-chairman; J. L. Stephens, Chanslor-Canfield Midway Oil Company, was elected second vice-chairman; and Henry Power, General Petroleum Corporation, was elected secretary.

The Committee is made up of chairmen and vice-chairmen of district committees, elected by producers of the 27 oil producing districts in California.

In addition to the officers above mentioned, two standing committees were elected — the Administrative Committee and the Allocation Committee.

OPA Rejects Ickes Second Crude Price Request, Report

It is indicated, from Washington reports, that OPA will reject the second request of Price Administrator Ickes for an advance in crude prices of 35c a barrel. OPA has taken no formal action on the second request but officials look for a decision shortly. The OPA, however, recently submitted an unpublished report to the Office of War Mobilization reaffirming its opposition to an increase in crude prices. In the special report the door is not entirely closed to aid for oil producers. It is stated that under hold-the-line order price increases that will be reflected in the cost of living, cannot be allowed. This may mean that subsidies can be used if a price increase is necessary. However, OPA will not concede that any increase is necessary for the successful conduct of the war. The report discusses new discoveries and reserves concluding that the general picture is not nearly as dark as outlined by the industry in its campaign for higher prices.

Offshore Oil Grab Bill Abandoned

Senator Nye, N. D., said he was abandoning all thought of reviving his previously sidetracked legislation to give the Federal government possession of California's offshore

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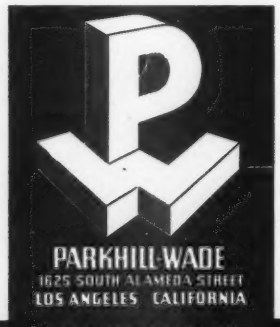

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oil lands. Lack of cooperation from the Navy, Nye said, was the reason for dropping the bill. Nye was the author of several other bills in the past designed to grab California tidelands for the Navy.

Standard of California Issues Statements

Standard of California on June 11th issued the following statement in connection with its contract with the United States Navy for the drilling and disposition of oil in the Elk Hills oil field in Kern County, California:

"Recent news dispatches suggest that Standard of California's contract with the Navy for the development of the Elk Hills Naval oil reserve was secretly negotiated, and that it reflects some disadvantages to the Government.

"On December 11, 1942, the Navy announced this agreement and in a press release stated that, at the direction of the President, a plan had been worked out whereby the Navy would take over control of the oil producing area in question.

"In this area the Navy had previously owned two-thirds of the estimated oil reserves, and Standard of California owned approximately one-third. Standard had owned these oil lands for many years.

"The Navy had been interested for a long time in working out some method for acquiring Standard's interests within the reserve, and Congress in 1938 passed an Act specifically authorizing and directing the Secretary of the Navy with the approval of the President to take steps to gain control over production from the Elk Hills field. In conformity with the legislation, the Navy and this company entered into the present contract whereby the Navy acquires all of Standard's property, and whereby Standard operates the field as a unit for the Navy under the Navy's control, with the oil produced to be divided in proportion to their respective interests.

"Under the contract Standard has been drilling new wells in order to increase production in the event of the Navy's need for such increased production. For a period of five years Standard is to produce a maximum of 15,000 barrels of oil a day, a quantity not very much in excess of the normal volume of crude produced by Standard from its properties in this field over a period of several years past.

"It is important to note that in the absence of the contract with the Navy, Standard could have increased production from its properties to any extent it might have desired, so the limitation on production as representing Standard's estimated share of the oil served one of the Navy's principal purposes, that of conservation.

"The total effect of this agreement was to give Standard a fair return in oil for its part ownership of the property, and to give the Navy control over production in whatever way would best suit the requirements of conservation and war needs.

"Thus, the contract, patriotically entered into by Standard Oil Company of California, is definitely in the Navy's interests and we feel sure will be so proved in any impartial Government study of the issue. Standard of California hopes and trusts that a qualified Government body will make such a study so that all the facts may be fully understood by the public."

President H. D. Collier of the Standard Oil Company of California, on June 17th issued the following statement:

"Standard of California has been advised that for technical, legal reasons the contract between the Navy, and Standard of California, for development of the Elk Hills Oil Reserve has been declared by a representative of the Department of Justice to be invalid.

"This contract was proposed by the Navy Department and was designed to consolidate the area under Navy control in the interest of conservation and to insure perpetuation of the area as a Naval Reserve in the public interest. As compensation, Standard of California was to operate the combination properties as a single unit in the Navy's behalf and to secure its proportionate and legitimate compensation for its percentage of the total reserves out of production.

"The agreement, approved by the President, was based on authority contained in a Congressional statute of 1938 which both the Navy Department and Standard of California believed to be fully adequate to support the type of agreement ultimately concluded.

"It would appear from information so far available to this Company that the sole question is one of interpretation of the law under which the Navy Department and this Company proceeded to negotiate. Fundamentally the agreement was fair to both parties, accomplished the Navy Department's long desired objective and was in the public interest.

"If the Navy in the light of the Justice Department's opinion, desires to terminate the contract, this Company will, of course, continue to own and operate its lands in the Elk Hills pending further negotiations with the Navy.

"This Company desires to cooperate with the Navy in every way possible in serving the best interests of our country.

•

Make reservations early for the Nomads Annual Wing Ding, to be held this year at the Riviera Country Club on July 23rd.

The committee in charge will greatly appreciate early reservations.

See California Oil World first July issue for full program.

•

A Refinery in Mexico.

C. N. G, A. Frolic

History was made at the California Natural Gasoline Association June Frolic, Saturday, June 5th, at Rio Hondo Golf Club, Downey, California, not because the attendance of 450 broke all records, and not because the whole affair was acclaimed one of the most successful in the association's history, but because the baseball team composed of oil company men won over the team made up of equipment men.

The amazing diamond victory was accomplished by the oil men through the simple means of digging up a pitcher by the name of John Paul Magee whose motto seemed to be "Don't Give Up a Run" and, according to apparently well-founded rumor, the fact that the oil men brought along their own umpires. This rumor seemed to have considerable basis as W. W. (We'll Win) Robinson of The Texas Co., and C. L. (Can't Lose) Fortner of General Petroleum Corporation called the strikes and the outs and finally the game in the seventh when the oil men were well in the lead. Following the game the equipment men went into a huddle which bodes evil for next year's fray.

With the first rays of the sun, the all day sports program got under way with divot diggers plowing up the fairways as they sought, by devious means, to shave par. Blind bogey winners were F. H. Blanford, Bill Blaska, Frank Colton, W. R. Parrish, W. C. Dayhuff, G. M. Liljenstein, J. E. Morse, W. Lang, Frank Burt, R. J. Kettenburg and W. W. Farrar, who split the pot of $31.50 to help keep the wolf away from the respective doors.

The feature of the fairway event was a telegraphic match played between a C.N.G.A. foursome composed of F. J. Colton, T. L. Taggart, R. D. Gibbs and L. V. Cassaday and a Natural Gasoline Association of America foursome consisting of Jim Vaiden, Ray Miller, Bill Warren and Bill Harts playing at Tulsa with the C.N.G.A. boys coming home winners 3 out of 4.

Other sports enjoyed during the day included volley ball, badminton, horse shoes, ping pong and elbow bending, this latter being participated in by all members and is that popular sport in which participants hoist and drain beakers of free beer.

The gasoline technical men made hey-hey while the sun shone in the all day sports program and then, not content to let things rest, they carried on far into the moonlight hours with an outdoor barbecue served in the evening followed by a super show at night.

Members who arranged and were in charge of the event included Ben Dumm, Allied Supply Co., chairman of the entertainment committee, who was assisted by Harold Dresser, The Fluor Corp., Ltd., Lloyd Jones, The Cooper Bessemer Corp., Ray Todd, Pacific Lighting Corp., Gordon Greene, Robinson Orifice Fitting Co., John H. Kunkel, The Fluor Corp. Ltd., Coles Bason, Ingersoll-Rand Co., Harold Saueressig, Southern California Gas Co., L. P. Sacre, Allied Supply Co., L. W. Wilbern, Daniel Orifice Fitting Co., W. W. Bostrom, General Petroleum Corp., and Martin Newell, Tide Water Associated Oil Company.

California Oil World will supply a print of any one of the Frolic pictures. Call George Tyler, Secretary of the California Natural Gasoline Association. Mr. Tyler's phone number is: VAndike 5521.

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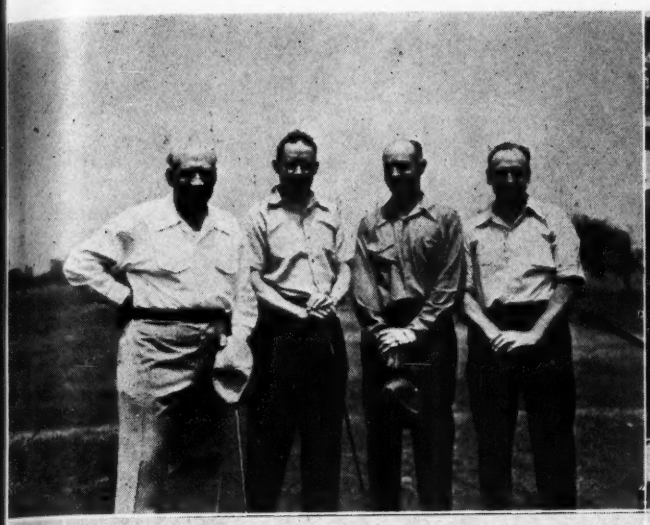
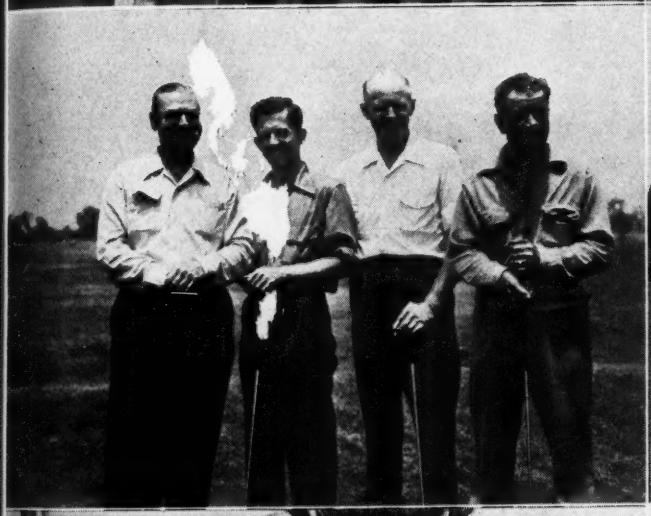
C. N. G. A. Frolic





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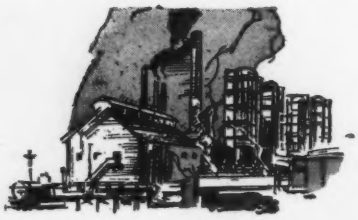

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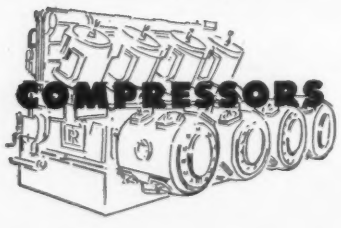

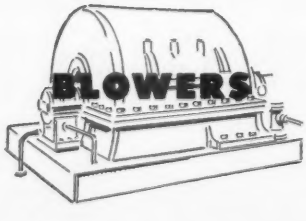

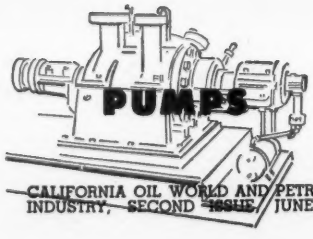

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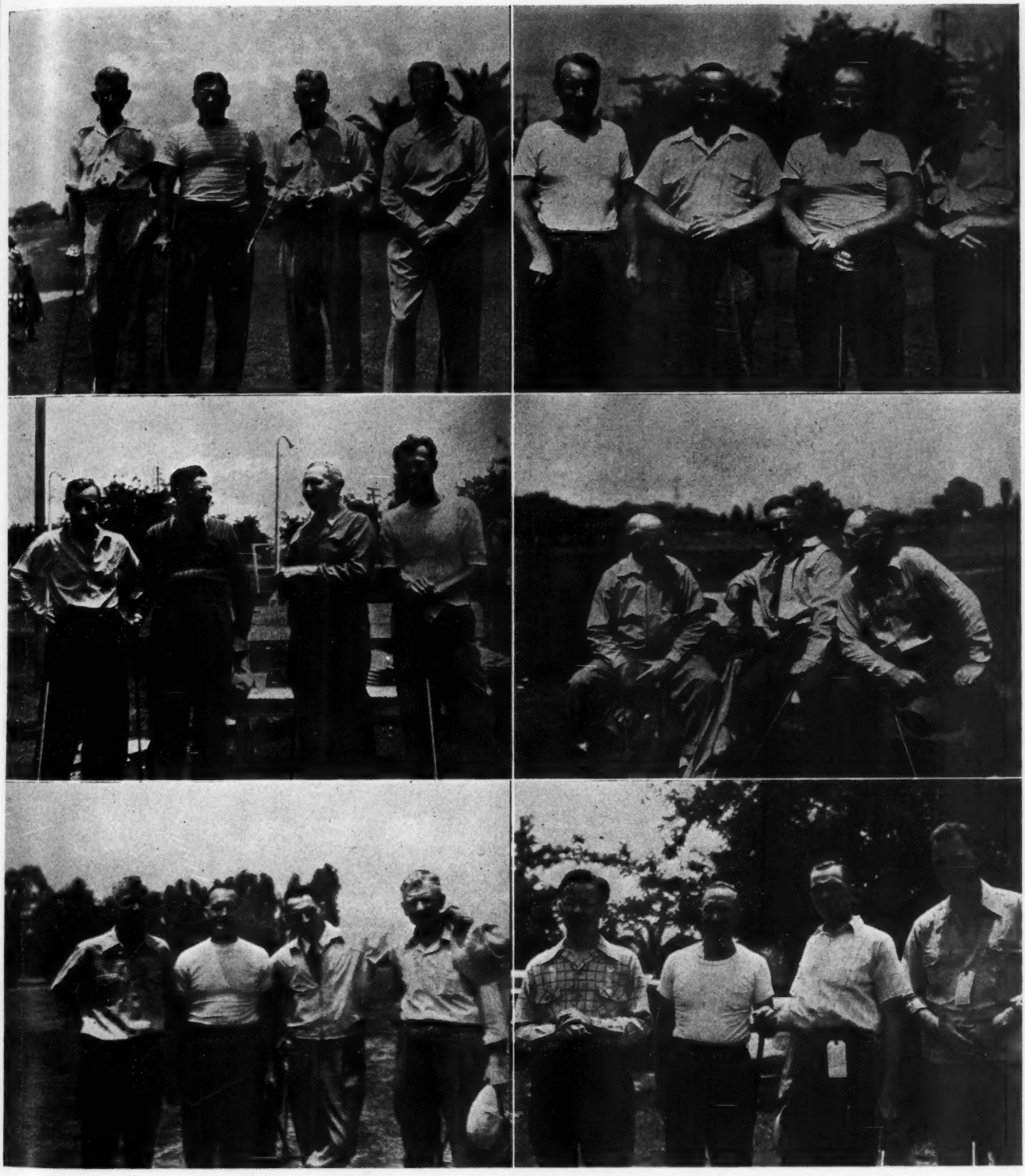
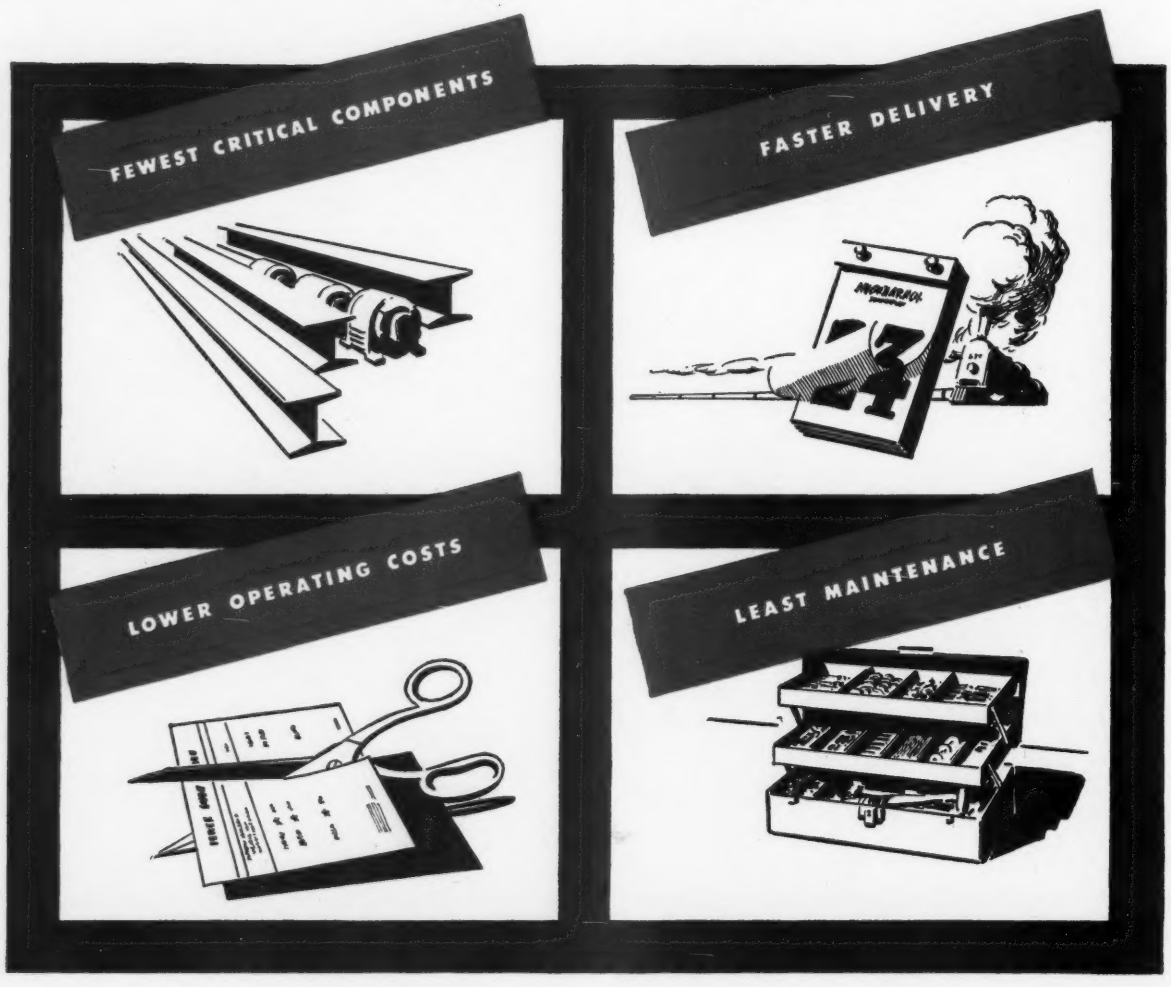


C. N. G. A. Frolic

C. N. G. A. Frolic

C. N. G. A. Frolic

Today *these 4 fundamental facts dictate the specification of* Atmospheric Aerator Type Cooling Towers



FLUOR BUILDS both Atmospheric Type Cooling Towers and Mechanical Draft Cooling Towers. To those concerned with the specification of a cooling tower, Fluor is ably qualified to give unbiased counsel in the selection of the type of tower best suited for cooling process water, for any service, in any location, in any quantity.

Fluor believes that today, *under War conditions,* the specification of an Atmospheric Aerator Type Cooling Tower is dictated by the following four fundamental facts which make substantial contributions to the war effort.

Fact No. 1. An Atmospheric Aerator Cooling Tower uses fewest critical components. Your specification of an atmospheric tower means that steel, brass, aluminum, motors, fans, gears, switches, conduit and other hard-to-get materials, essential to the Mechanical Draft Types, are released for critical armament uses, as are the thousands of man-hours required for their manufacture, assembly and shipment.

Fact No. 2. An Atmospheric Aerator Cooling Tower can be delivered faster,—often three times quicker than towers of the Mechanical Draft Type. Because the production of critical

components for Mechanical Draft Towers is wholly or in greater part in the hands of sub-manufacturers, the final delivery of a Mechanical Draft Type is dependent on these sub-manufacturers. On the other hand, the manufacture of an Atmospheric Aerator Type Cooling Tower is controlled by Fluor. Throughout the whole defense and war program Fluor has never failed to meet or beat scheduled delivery dates. This record will continue; Fluor is geared to do it.

Fact No. 3. An Atmospheric Aerator Cooling Tower costs less to operate, because it requires least horsepower. There are no fan motors to operate. Here again, power, essential to war industries, is conserved to relieve the power shortage.

Fact No. 4. In an Atmospheric Type Tower, maintenance costs are negligible. Mechanical devices, such as motors, gears and fans, in a Mechanical Draft Type Tower require attention, — entail costs in both operation and upkeep. Maintenance like this and the man-power attendant to it, are eliminated with the specification of an Atmospheric Aerator Cooling Tower.

On the basis of the above four facts, the only limiting factors making the specification of Mechanical Draft Towers mandatory are (1) lack of space for the erection of the Atmospheric Type and (2) extremely subnormal wind conditions. You may ask, "How can we be certain that a Fluor Atmospheric Aerator Cooling Tower is the absolute correct specification under any conditions?"

Fluor Engineers will gladly give specific, unbiased answers to this question after analysis of your problem. Since Fluor makes all types of cooling towers our thinking is completely independent. If analysis shows that the Mechanical Draft Type Tower is the answer to your problem, Fluor will cooperate by furnishing expert documentary evidence of essential need as a means of assisting you in obtaining the necessary directive.

These, then, are the facts why Fluor recommends your specification of Atmospheric Aerator Type Cooling Towers for the duration. Wire or airmail your inquiry for prompt action. *Be Sure with Fluor.*

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LUNKENHEIMER VALVES

Nomads June Meeting

Discussions covering activity in Europe and the maintenance of equipment for the North African campaign were the features of the regular monthly dinner meeting of the Los Angeles Chapter of Nomads held Wednesday evening, June 9, 1943 in Los Angeles. The meeting was presided over by Roland Smith, vice president of the Chapter in the absence of Henry Pullman who was in Canada at the time.

Announcement was made of the Annual Wing Ding for which plans are now being made by the Entertainment Committee of which Fred Tyler is Chairman and George Trembley Vice-Chairman. This affair will take place at one of the nearby country clubs sometime during the latter part of July.

Induction of Paul Medearis as Regular Member and Wm. E. Krupp as Associate Member was conducted by Master of Ritual, M. E. Montrose. Two new Regular Members, Walter C. Shakleton and Russell Wilson, were not present for induction because of absence in Canada.

The meeting was then turned over to the Master of Ceremonies for the evening, Ray Humphries, who introduced the speakers. The first speaker was K. L. Flatau who served in the French Army until its collapse and finally found his way to America in 1941. His subject was "Europe Seen From France" and, after giving his impressions as to the cause of the fall of France from personal observation as a soldier in the French Army, he discussed the methods necessary to prevent a Third World War and what must be done to Germany to make sure she will not later precipitate such a war. Following his talk Mr. Flatau answered numerous questions asked by the members and guests present.

A most interesting talk was then given by Frank D. Richardson who had recently returned from North Africa where he had been serving with the Ordnance Department of the U. S. Army. After describing a

(Continued on Page 22)

Standardizing Wire Rope and Lengthening Its Life to Conserve Steel

By D. J. Henecker
Wire Rope Division
Jones & Laughlin Steel Corporation
Pittsburgh, Pa.

Wire Rope is an essential War Machine. This is evidenced by the great quantities being purchased by the Army, Navy and Merchant Marine. It is essential on the controls for aircraft, and is used extensively for balloon cords, on mine sweepers, truck winch lines, tank tow cables and for Navy towing hawsers.

Think how vital the time element is in loading and unloading ships today! The length of time required woud be fatal without Wire Rope. If we had no rope, essential mines could not produce, and it would be impossible to drill oil wells. Without it, blast furnaces and steel mill operations would practically cease, elevators would stop running, and in addition to the logging industry suffering, the handling of iron ore on the Great Lakes would be hampered. In fact, no heavy industry can operate without it. You perhaps know that Wire Rope is a controlled material under the Controlled Materials Plan.

In 1942 this country produced an all-time high of about 260,000 tons of wire rope and every piece of machinery was taxed beyond capacity to accomplish this job. In producing this tonnage 22 million pounds of so called Hemp Center were used. It is clear that another industry is also affected favorably when we lengthen Wire-Rope life.

At the request of the War Production Board the National Bureau of Standards asked the Wire Rope Industry for an approved simplified practice recommendation for Wire Rope. An exhaustive analytical review of published standards then followed and numerous tables were submitted. These tables provided sufficient selectivity to adequately cover the consumer requirements for rope applications and also conserve critical materials and available productive capacity with the maximum possible simplification.

After studying the entire list it was evident that instead of five standard grades used in the past, the rope requirements would be adequately and correctly served by three grades. The tables submitted represented the majority of rope tonnage involving 6x7, 6x19 8x19, and 6x37 constructions. This provided a reduction from 352 items to a total of 182 items or a reduction of 48 per cent in these constructions alone. The total of all varieties was reduced from 973 items to 643 or 33.9 per cent.

The Bureau of Standards then printed and distributed across the country several thousands of copies of the revised practice, soliciting the comments and criticisms of all important users. The Bureau was agreeably surprised to find that such a procedure was indeed welcome and acceptable. It was then approved by the War Production Board, and the whole program in its completed form is now coming off the press in Washington for immediate distribution.

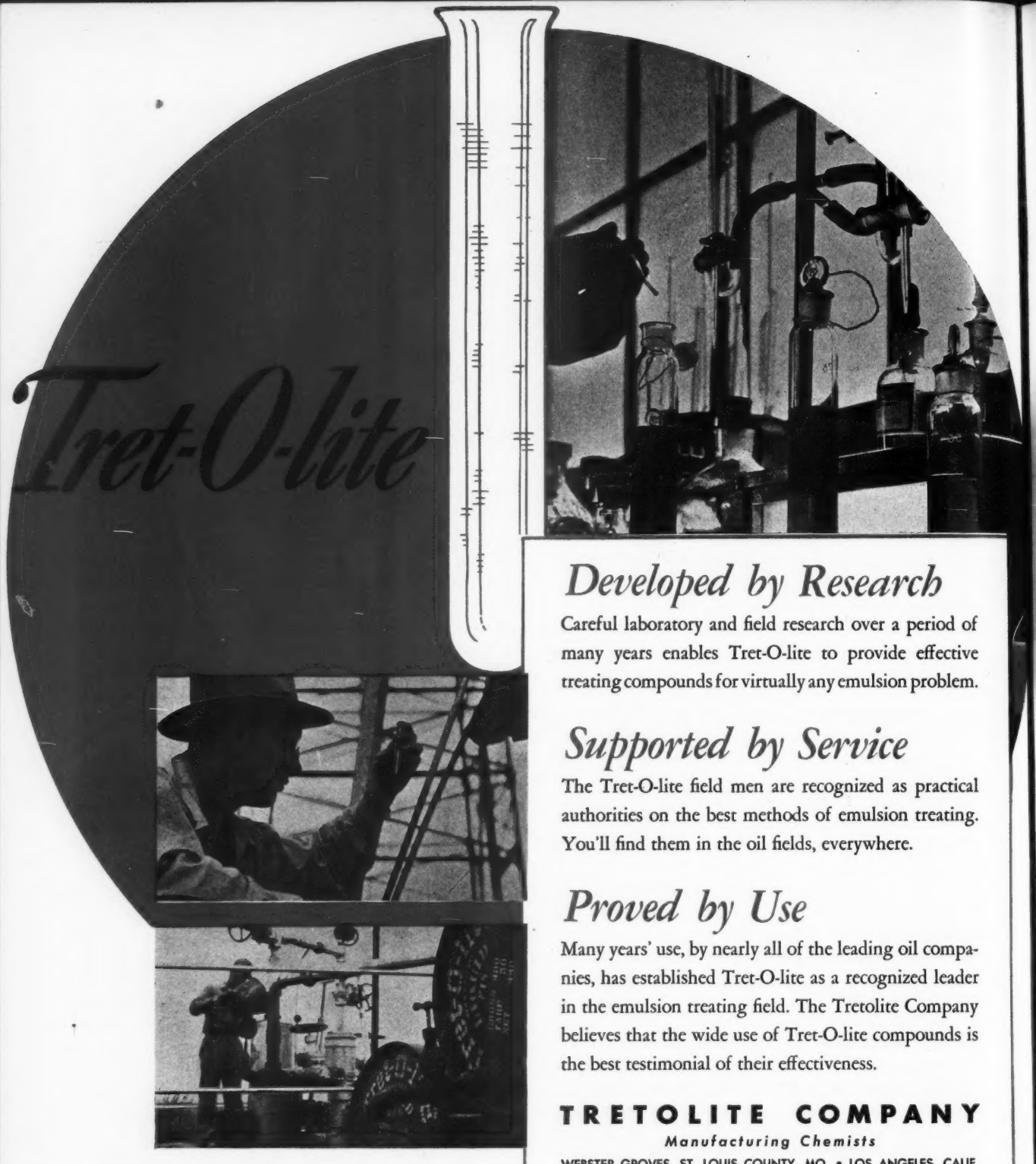
This is the Wire Rope Industry's contribution to the conservation program, and we will now review what the Oil and Gas Industry can do.

The Oil and Gas Industry can contribute generously to the steel conservation program by increasing the life of the wire rope used by it daily. This can be accomplished by handling it like the piece of machinery that it really is. Many volumes have been written on the use and abuse of Wire Rope, and although most of us are familiar with these factors in general, it is expedient that a brief review be made at this time. The ability of Wire Rope to withstand constant abuse under stress is the secret of its great value to the modern science of oil and gas-well drilling. All abuses continue to exist, and in addition to those of mechanical origin, the most frequent errors are those of human origin involving carelessness, haste, or indifference.

When thoroughly analyzed we find that actually Wire Rope is a delicate mechanism or machine containing many movable parts, and like any piece of machinery, its performance depends almost entirely upon the treatment it receives, both at the time of installation and throughout its service life. Wire Rope has been referred to as the "jewelry part" of the steel industry. This term has been applied for many obvious reasons, the most important of which is the precision and engineering skill that is exercised throughout its manufacture.

Errors in socketing invariably result in shorter Wire-Rope life and are often costly. Unless a rope is seized properly, one or more strands may work back into the rope and sometimes untwist close to the socket where loose or drawn strands will be observed. Early fatigue failure at the socket results, and occasionally high strands have been known to develop, all because the rope was not properly socketed in the beginning. If the proper care in seizing is used, and zinc, instead of Babbitt or solder, is used, much of the difficulty of socketing will be removed. Most Wire-Rope Catalogs contain information on properly cleaning the wires and keeping them straight instead of bending them back in the basket of the socket. It is to be remembered that the clip or clamp has not yet been designed or discovered that will develop the full breaking strength of the rope, although a properly attached socket will develop a greater holding power than the maximum breaking strength of the rope.

During the installation of a new line, if it's impossible to place the reel of rope in a position where the



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DEHYDRATING DESALTING

line will lead straight from in front of the rig, a small derrick floor block at least 18" in diameter should always be used and remember to break a new line in slowly. When breaking in a new line, run the rope, socket, and jars into the hole several times, then add the stem, run a few times more, and add the bit. This will help to set the rope lay and create a well balanced line. Never run in without the jars. The jars are necessary so that the line can be shaken loose in case of sticking. A little care to see that the wraps of the first layer are wound close together, and then, starting the rope back properly on the second layer will avoid uneven piling up and result in a smoother running line. Winding a new rope on a shaft should always be done under a tension. Under no circumstances should the line be brought over or under a sill . . . small dog legs are bound to result. Without these installation precautions a rope has been known to curl, or corkscrew, and develop excessive wear in spots that are often erroneously referred to in the field as "soft spots".

Too much will never be said about worn sheaves or sheaves out of alignment. Sheaves with worn grooves are especially detrimental to a new line inasmuch as the line must do extra work in grinding out the grooves at which time it receives extra wear and is subjected to a torsional action, and a restriction of free wire movement while bending. These conditions all tend to speed up fatigue. It is good practice never to install new rope on a worn sheave, because when the groove in the sheave becomes too wide it permits the rope to flatten. When a new rope is used in a groove that is too narrow or small, it is obvious that some life is being pinched or squeezed out of the rope. It is suggested that before installing a Wire Rope the condition of the sheaves should always be checked very carefully, using a standard sheave groove gauge. If in doubt about the proper groove diameter, one can always refer to the tables appearing in standard Wire Rope catalogs. The standard sheave tolerance for a 1" diameter rope is plus 3/64" minimum to plus 1/8" maximum. When sheaves become out of alignment the rope will be obliged to sway from side to side, resulting in spotty or uneven abrasive wear. Very often after sheaves are checked with a master sheave gauge, they can be machined to correct size. A master sheave gauge should be considered as an important part of every driller's tool kit.

Leading a line incorrectly through the dividers on a standard rig will put sharp bends or sets in the rope which commonly are known as "dog legs". This results if the rope is bent sharply where it passes from the active to the dead side of the shaft. Three or four turns of rope should always be maintained on the live side of the shaft to allow for snubbing, and thereby avoid any appreciable tension in the section passing through the dividers. Without this procedure, excessive wear and spot failure will develop when this part of the line is working in the hole.

A drilling motion that is not correct will set up excessive vibration and fatigue which is always detrimental to Wire-Rope life. Care should be exercised to avoid a speed that is too great. Avoid drilling with a tight line as this invariably indicates that the tools are not working on the bottom and is very hard on the rope. Avoid, also, drilling with too loose a line as "dog legs" and even kinks often result when too much line is in the hole. Rapid failure at the socket often results, and you have often heard the term "whipping off at the socket" which is indicative of this condition.

Goosing or slipping the lines through short clamps does more harm than one would imagine while watching the operation from a rig floor. This is a common occurrence and is often done in the belief that it is speeding up production. Unfortunately, something is being taken away from the life of the line every time it is goosed through short clamps, because of the pressure and the generation of heat which changes the physical characteristics of the wire. It is obvious that this practice increases abrasion and the strands become drawn and somewhat loosened. These conditions are always accentuated when the slips are worn or improperly fitted. Goosing burns the wires to glass hardness. Longitudinal broken wires are likely to appear below the clamps in the section that has been goosed, due to the flexing of the glass hard wires in normal drilling motion.

Exercise some care when lowering the tools or the baler into the hole. If the wire line is poured into the hole too rapidly and the tools or the baler, as the case may be, hit the water the speed of the line coming down above it is not retarded, severe kinking or dog-legging will occur. Cores have been known to pop and become chopped in two under these circumstances. It is evident from these remarks so far that many things can happen to kink a line, and once a line has been kinked or dog-legged it is injured for life. Anything that is done to force or permit the core, the wires, or the strands to get out of balance will permanently injure the line.

Overloading or overstraining will shorten the life of the cable. A 1" diameter Mild Plow Steel Drilling Line of 6x19 construction, Certified by laboratory tests to A. P. I. Standards, has a breaking strength of 33 tons. Whereas this sounds like a very strong rope even it can be broken or destroyed by overstrain. When drilling lines are used for fishing or swabbing, they are very often subjected to stresses above the elastic limit or yield point of the steel. This results in permanent deformation of the wire and accelerates early fatigue.

Unnecessary corrosion is another factor to deal with, and this very often happens during periods of idleness between drilling jobs. Only

lubrication will protect against the wear of friction and nothing can withstand friction forever. There is a constant moving of wires against wires and strands against strands when a Wire Rope is in operation. Salt and alkaline water in the hole usually result in hastening a corrosive condition, sometimes causing corrosion fatigue. All wire line cores are especially treated to provide some initial internal lubrication, but they cannot be sufficiently saturated to provide an indefinite supply and shoud not be considered an oil reservoir. If the core lubricant is allowed to become exhausted, the core and subsequently the rope deteriorates rapidly. The core is the heart or main support of the rope. Avoid piercing it with nails or spikes or flags for markers. While the application of hot lubricant is more effective, either hot or cold will do, and the lubricant should have the ability to penetrate to the core, adhere tenaciously, and resist wiping off when lines are stored, thereby keeping out moisture. Such a lubricant should be free of corroding chemicals.

These nine points: namely, socketing, installation and even winding, correct sheaves, lead through dividers, drilling motion, clamp slippage, care in lowering tools, avoiding overstrains, and corrosion, cover most of the high spots and if generally adhered to by the cable tool drilling operators of the Oil and Gas Industry, the result will definitely be longer rope life and a distinct contribution to the War Effort.

Presented at the Spring Meeting of the Eastern District, A.P.I. Division of Production, Pittsburgh, Pa., April, 1943.

Warner Clark Now Chairman Convention Committee

Warner Clark, general manager of conservation in Standard of California's producing department, has been elected chairman of the Conservation Committee of California Oil Producers.

The committee, which is composed of representatives of California oil operators, acts as an advisory group to the operators on conservation.

Samuel A. Huffman Appointed Kobe Production Manager

Mr. Samuel A. Huffman has been appointed Plant Manager of Kobe, Incorporated, Huntington Park, California. According to Mr. C. M. Rader, Ass't. General Manager, Mr. Huffman will be in complete charge of hydraulic manufacturing. The past success and experience of the

Samuel A. Huffman

new man lends itself well to the efforts of Kobe to expand plant personnel and operations to meet the considerably increased volume of business current operations require.

Mr. Huffman, graduate of the University of Cincinnati, is a mechanical engineer whose first position was as a machine designer of automatic machinery for the U. S. Playing Card Company of Cincinnati. In 1935 he joined the Miller Printing Company of Pittsburgh where he was responsible for the redesigning of the presses and machinery they manufactured and sold. This was an eminently successful undertaking which resulted in considerable improvement in production and led to their achieving a predominant posi-

rather perilous voyage which took him around the Cape of Good Hope to Africa south of Cairo, he discussed the work done in repairing motorized equipment and the building of units from parts taken from several other units. These were used in the North African campaign and many other pieces of heavy equipment, including trucks and tractors, were flown from the shops in the territory along the Red Sea to the army west of Alexandria. These shops themselves had to be outfitted to a great extent with machinery built up from parts of old machines.

Among the many guests at the meeting were the following from foreign countries: Wm. M. Thornbury of the Ecuador Oilfields, Ltd. from Ecuador; C. H. Strickland of the Iraq Petroleum Corp. from Iraq; F. D. O. Longe of the Shell from Trinidad; Dave Dimmitt of International Petroleum Co., from Ecuador; and C. C. Sutton of the Caribbean Petroleum Co. from Venezuela.

Nomads Meeting

(Continued from Page 18)

tion in their field. Later, he became plant manager for this company—a position responsible for the manufacture of some 20,000 parts, many of a precision nature. Upon the outbreak of war, the manufacture of printing equipment practically ceased, and this company early assumed contract facility obligations with the Government—their primary endeavor being the manufacture of recoil cylinders and gun mounts. Mr. Huffman was responsible for much of their success in securing these contracts and for the planning of their manufacturing operations. He is due a large share of credit for the outstanding results obtained, which lead to their being awarded an Army-Navy E for excellence.

Later, Mr. Huffman became associated with the Arms Franklin Corporation who had taken on war contracts for telemotor receivers for steering engines, in addition to the manufacture of anchor and capstan windlasses and ram groups for the Navy, and in three months' time succeeded in doubling their production and net profits—being responsible for their also receiving the Army-Navy E at the end of six months.

THIS LAUGH

OFF!!

Knowing his friend Leonard was very fond of music, Archibald secured two tickets for an Igor Gorin concert and invited Leonard to attend with him.

"Sorry, but I can't go; Shapiro is playing tonight," replied Leonard.

Another time Archibald secured tickets to a Melchoir and Hampton recital and called his music appreciation friend Leonard.

"Can't go," said Leonard. "Shapiro is playing tonight."

This happened a third and a fourth time, when Archibald asked: "Who is this Shapiro and where does he play?"

"I don't know who he is or where he plays," replied Leonard, "but when he does play I spend the evening with his wife."

Cohen pulled out his pistol and put it in Rosenstein's face.

Just as he was about to fire, Rosenstein asked: "How much do you want for the gun?"

Cohen, in telling the story, said: "And how could I kill a man ven he vas talking beesness?"

What notables might have said for publication had they played golf:

Caesar: "I shot, I sliced, I bunkered."

John Paul Jones: "I have not yet begun to putt."

Perry: "We have found the balls, and they are ours."

Jackson: "Don't shoot until they're on the green."

Sherman: "Golf is hell."

"I started out with the theory that the world had an opening for me."

"And you found it."

"Well, rather, I'm in the hole now."

Murphy had been careless in handling the blasting powder and Duffy had been deputized to break the news gently to the widow.

"Mrs. Murphy," said he, "isn't it today the fellow calls for the weekly payment for Murphy's life insurance?"

"It is," answered Mrs. Murphy.

"Well, now a word in your ear," said Duffy. "Sure ye can snap your fingers at the fellow today."

"Who broke that chair in the living room last night?"

"It just collapsed all of a sudden, father, but neither of us was hurt."

A salesman taking his bride South on their honeymoon visited a hotel where he boasted of the fine honey.

"Sambo," he asked the colored waiter, "where's my honey?"

"Ah don't know boss," replied Sambo, eyeing the lady cautiously "She don't wuk here no mo'."

"How did the accident happen?"

"I was hugging a curve."

"Yeah! that's the way most of them happen."

"She's a very nicely reared girl, don't you think?"

"Yeah. She don't look so bad from in front, either."

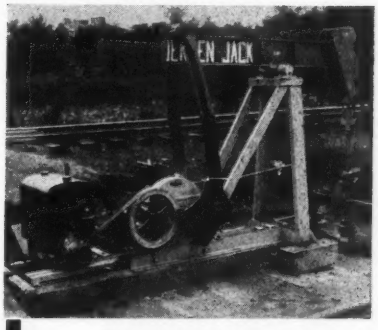
During the day Mrs. Brown discharged her old maid and hired a new one, who answered the door bell when Mr. Brown arrived home in the evening. He carried a bunch of roses, which he handed to the maid, saying:

"Present these to Mrs. Brown, telling her I want to see her at once."

"All right," said the maid, "but you better make it snappy, because she expects the old man any minute now."

The luncheon club guest looked at the plate of cooled hashed turkey, spaghetti, mushrooms and sauce which was set down before him. "Is this to eat," he asked, "or has it been?"

You Can Bet on a JENSEN



This JENSEN installation in Michigan handles 7,100 gallons daily. 1225' well. 2" tubing. Twenty 24" SPM.

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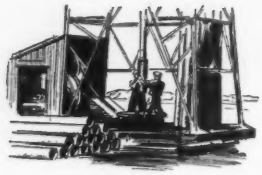
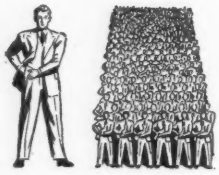
PHOTOMICROGRAPH . . . MAGNIFIED 62 DIAMETERS (APPROX. 93,000 TIMES)

This shell . . . *Cibicides americanus*, a species of *Foraminifera* . . . is actually the size of a speck of dust. Originally its tiny owner lived on the bottom of an ancient sea in the San Joaquin Valley. But when we found it, 35 or 40 million years later, it was buried more than two miles underground.

It cost us $146,610 to look at this *Cibicides americanus!*



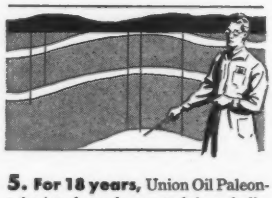
1. On March 1, 1941, a Union Oil crew in the San Joaquin Valley began drilling Kernco #31-3. Four months later, when they abandoned the hole without finding oil, they had reached a depth of 12,396 ft. and spent $146,610. All they had for their efforts was a number of shells like the one above.



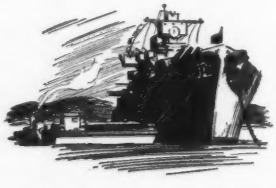
2. If Union had been a one-man company, Kernco #31-3 might have finished us. But since it is owned by 31,652 people, the average loss to each was only $4.63. It is this capacity to distribute losses, as well as profits, *among a lot of people* that has made America's oil development possible.

3. For finding and producing oil is no penny ante game. Out of 169 exploratory wells drilled by the industry in California last year, *only 5 proved of any importance.* They didn't all cost $146,000, of course, and the 5 good ones paid for a lot of dry holes.

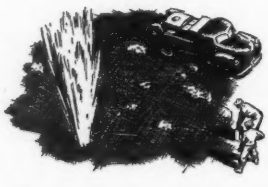
4. But if you're going to stay in the oil business, you have to be big enough to absorb the losses with the gains. It is true that scientific methods, developed by the oil companies, have taken *half* the gamble out of finding oil.



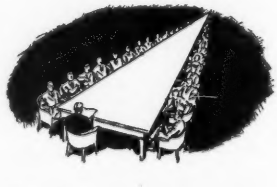
5. For 18 years, Union Oil Paleontologists have been studying shells, like the one above, taken from thousands of wells. By combining this data with core analysis and geophysical findings, we can plot the underground formations where oil *could* occur.



6. But unfortunately, oil *doesn't* occur where it *could* even 1 time in 10. So we still get plenty of dry holes. Yet in spite of these odds, American oil companies have discovered more oil than the rest of the world combined. Why? Because they were big enough to do the job.



7. Big enough to spend thousands of dollars *every month,* as Union does, just looking for promising formations. Big enough to drill several dry wildcats *every year* without going broke. Individual Americans, operating on their own, could never have done this.



8. But groups of Americans, pooling their money in corporations, could. In this principle of *multiple ownership* you have the secret of America's amazing industrial progress. Without it our standard of peacetime living, *and war-time production,* could never have been.

UNION OIL COMPANY

OF CALIFORNIA

AMERICA'S *FIFTH* FREEDOM IS FREE ENTERPRISE

This series, sponsored by the people of the Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles, California.

Field Development

Los Angeles Basin

Crown Pet. Seeks Drilling Rights

Crown Petroleum Co., comprised of three present Wilmington oil operators, is negotiating with the Long Beach City Council for permission to drill east of the southerly end of the Los Angeles County Flood Control right-of-way within the corporate city limits. Currently banned by local ordinance from drilling operations, the property under advisement and proposal lies between the Flood Controls easterly limits and Golden Avenue and from Seventh Street south to Boardwalk.

The property is completely separate from the flood control lands already under lease to Continental Corporation and Continental Development Corp., neither of which has any interest or participation in the current drive to open southwesterly Long Beach residential areas to the drill.

Beverly Oil Plans Test

Beverly Oil Co. is planning to drill a 7000 ft. grass root job in the old Salt Lake field within the limits of the City of Los Angeles. The company, which owns three of the old field wells, was enjoined by the Planning Commission from redrilling one of the existing holes and plans to seek permission by appeal for the new project. Seaboard Oil Co. likewise is considering a proposal to drill in the Chavez Ravine sector within city limits.

Gen. Pet. Schedules Norwalk Area "Cat"

General Pet. Corp. completed an intensive leasing program in the Norwalk area of Los Angeles county and is preparing to drill H. B. Allen No. 1 near the west quarter corner of sec. 12-3s-12w. The wildcat lies in a yet undrilled sector north of Firestone Blvd. about a mile northwest of the Norwalk city limits and approximately a mile and a half southwest of the once prolific Santa Fe Springs field.

Two New Wildcats For Montebello-Whittier Area

Two projects, one of which is already under way, are to be put down in the area lying north of the Whittier and east of the Montebello oil fields. First started is Continental Oil Co.'s Baldwin No. 1 in the southwest quarter of sec. 3-2s-11w which was last reported drilling in sand and shale at 3155 ft. Next to start will be Barnsdall Oil Co.'s Baldwin No. 1 in the southwest quarter of section 11 in the same township for which location has been prepared.

Old Field To Get New Try

Standard Oil Co. is planning a modern-day deep drilling test of the old Whittier Hills field immediately east of the town of Whittier. Located near the north quarter corner of sec. 26-2s-11w, the test—Murphy-Whittier No. 62—will be in the central section of the old field which to date has produced nearly twenty million barrels of good heavy gravity oil. Discovered in 1898 by Central Oil Co. the field's first drilling boom came around 1912 when serious development began. The field covers approximately 550 acres and produces from the Repetto-Puente

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Aliso Canyon	Standard Oil Co., Frew	1-1	29, 3-16		Grading
Chatsworth	Anderson-Prichard Oil Corp., APR	1	24, 2-17	1285	Drilling
Del Valle	Standard Oil Co., N.L. & F.	3-1	19, 4-17		Location
Las Llajas	Western Gulf Oil Co., Braly	1	13, 3-17	9610	Fishing D.P.
Montebello	Barnsdall Oil Co., Baldwin	1	11, 2-11		Grade
	Cont. Oil Co., Baldwin	1	3, 2-11	3155	Drilling
Puente	Barry Oil Co., Inc., Rowland	1	14, 2-10	2423	Idle
	Melvin Hansen, Dragna	1	24, 2-10	3222	Idle
	J. C. Drilling Co., Kelso	1	12, 2-10	2385	Milling fish
	Lomi Oil Corp., John Rowland	1	14, 2-10	3140	Drilling
	McCartney, Chas. E. Hurley	1	4, 2-10		Prep. to spud
Rice Canyon	General Pet. Corp., Mendota	1	22, 3-16		Rigging up
Rosecrans	Union Oil Co., Amestoy	1	18, 3-13	4011	Drilling
	Shell Oil Co., Inc., Bank	1	18, 3-13	1384	Drilling
Temescal	The Texas Co., Dominguez	57-1	1, 4-18	3016	Drilling
Whittier-La Habra	H. & C. Oil Co., Joyce	1	22, 2-11	5577	Drilling
	Los Nietos Valley O. Co., Woodward	1	29, 2-11	3600	Idle
	Orange County				
Newport Beach	Signal O. & G. Co., Willow Comm.	1	19, 6-10	2950	Drilling
	San Bernardino County				
Chino	Chino Hills Oil Co., Kraemer	1	33, 2-8		Location

zones at depths ranging from 200 to 3000 ft. in a faulted monocline. Deepest drilling in the area was by Standard in its Home No. 21 which carried to 5045 ft.

Sentous Zone Well Makes Solid Flow

Tide Water Assoc. Oil Co. finished its Sentous zone well, Vickers No. 78, at 8287 ft. in the Inglewood field. Completed under wraps to conform to good conservation principles the well's highest rate of flow has been 829 bbls. of clean 30.8 gravity oil and 960,000 cu. ft. of gas through a 12/64 in. bean during an 11 hour period. In the southerly leg of the Vickers lease the company is perforating and testing No. 19 above 1690 ft. to attempt better shallow production. The well formerly produced the lower Tar and Upper Rindge zones.

On the Baldwin-Cienega lease Standard Oil Co.'s No. 105 is redrilling at 2847 ft. to bypass the former 6284 ft. depth and attempt Sentous zone production at this point. It is understood that failing such production the try will be carried to basement for an exhaustive look at the section in this part of the field.

In the extreme northwesterly field section Federal Oil Co. has let contract to Pike Drilling Co. for another Sentous zone well.

Signal Hill Deep Test Scheduled

Almost simultaneous with the 22nd anniversary of the discovery of the Signal Hill "Wonder Field" comes the report that The Texas Co. plans a 12,000 ft. deep try on the Fields lease. Located at the northeasterly intersection of Spring and Atlantic Avenues the property lies north of the main fault and offers considerable promise and even more conjecture as to findings in the Lower Miocene. Production south of the fault has already been established below 10,000 ft. in two projects. These wells were relatively small but have now paid out in both instances while yet maintaining 150 bbl. production.

This field, discovered by Shell Oil Co., Inc., in June, 1921, has been remarkable since its inception. Small in surface area but possessing tremendous sand thicknesses—up to 4000 ft.—the field has produced nearly 800,000,000 bbls. of good oil. Surpassed in California production only by the vast expanses of the Midway-Sunset fields, the record was made from only about 1600 proved surface acres which was developed on slightly more than one acre per well to establish a world-wide record for townlot development.

Huntington Beach Drilling Abounds

Demands for good fuels are being met in this Los Angeles Basin field. With work under way at both extremities, in the tar sand section and along the ocean front, this field's activity is increasing.

In the Five Points area McVicar-Rood-McCallen, John Marion, D. D. Dunlap and C. L. Zastrow are pursuing their respective drilling programs with multiple schedules for each. Along the shore the Tideland sands are under development by H. R. Hamilton, operator and Southwest Exploration Co., each of which has many whipstocked wells to drill in immediate succession. In the Tar Zone areas several redrills are starting now while innumerable operations are in process of formation or discussion. At the northwesterly flank Standard Oil Co. and Signal Oil & Gas Co. continue development with consistently good returns.

Chatsworth Try Under Way

Anderson-Prichard Oil Co. Anderson-Prichard-Ramsey No. 1, sec. 24-2n-17w, is drilling at 1285 ft. Located near the Chatsworth Reservoir, the wildcat lies on lands long considered potential by many persons and is being carefully watched. While shallow possibilities are not discounted the main objective is reported to be below 5500 ft.

East Gato Ridge "Cat" Running Pipe

General Pet. Corp.'s Wickenden No. 2, sec. 24-8n-32w, east of the southerly tip of the Gato Ridge field, is running 5¾ in. casing to test showings encountered on a redrill job. Once bottomed at a barren 5189 ft. the well was whipstocked to the north and redrilled to 4310 ft. in Basalt topped at 4269'. Some returns worthy of trial were encountered in the Monterey Shale below 3378 ft. while the Lower Monterey was barren below 4130 ft. General has repeatedly drilled the uplift in the firm conviction that upon this structure there is oil.

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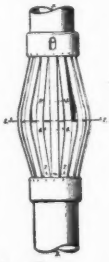

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Coastal District

North Counties Work Proceeds

The search for and development of gas reserves in the northern portion of the state continues without abatement. Among the projects recently started is Standard Oil Co.'s Keller No. 1 in sec. 26-2n-1e in the Mulligan Hills near Antioch in Contra Costa county. Also ready to work in the county is Cal-Bay Corp., which is preparing to spud Faria No. 1 on sec. 21-2n-1w in the Pittsburg area, and Trico Oil & Gas Co. and Signal Oil & Gas Co. which are drilling a water well for a joint test on sec. 4-2n-3e in search of gas south of the Rio Vista field.

In Glenn County Superior Oil Co. is taking a second look at the Dodge Land Co. holdings with well No. 2, sec. 7-19n-1e, last reported drilling at 1395 ft.

Royalty Service Corp. has not yet started work on Federal No. 1 in sec. 21-24s-10e near Bradley in Monterey county, but is grading roads to the selected site.

In the Thornton area of Sacramento county Amerada Pet. Corp.'s no-dope deep try on sec. 36-5n-5e is reported only as drilling at 8367 ft. On section 30 of the township Jergins Oil Co. McCormack No. 1 was last reported in sandy shale at 5195 ft.

Solano, Sutter and Tehama county have one working wildcat each. Deepest is The Texas Co.'s Tuscan Springs project of Tehama county. This well, Walbridge No. 1-A, is deepening at 1544 ft. after standing idle for some time when troubled with flowing surface waters. Shell Oil Co., Inc., is rigging up to start Shell-Buttes Comm. No. 1 on sec. 2-15n-1e in Sutter county while the Solano job, Standard Oil Co. Honker Comm. No. 1A, is preparing to spud on sec. 25-3n-1w in the Suisun Bay area.

By far the busiest county is San Joaquin with an intensive search for additional Lodi area production under way. On sec. 10-4n-7e Amerada Pet. Corp.'s Comm. No. 10-1 again found gas in the area and was completed at plugged depth of 2619 ft. flowing 4,110,000 b/d cu. ft of gas through a ½ in. bean before shutting in pending demand and pipelines. The company is immediately to start one well each on the adjoining sections 15 and 16. On section 22 of the township Bankline Oil Co. is rigging up Community No. 22A-1 for an early start. In the Roberts Island sector of the county Standard Oil Co. is grading for Holt Comm. No. 1 on sec. 15-1n-5e.

In the Rio Vista field Standard Oil Co. finished State No. 4 on sec. 12-3n-2e at 5517 ft. Finished with 270 ft. of open interval the well made 17,512,000 cu. ft. daily rate of gas through a ¾ in. bean before shutting in under 1600 lbs. pressure. Only other active well is Midland Fee No. 5 on sec. 4-3n-3e, a joint Standard-Texaco project last reported turning to the right at 4219 ft.

Eureka Canyon Well in Sand

El Rika Oil Co. well No. 4, sec. 33-4n-18w, is drilling ahead in oil sand at 430 ft. after entering oil sand and shale at 240 ft. To the west of here Standard Oil Co.'s Fillmore Community No. 2-1, sec. 24-4n-20w, is rigging up with an early spud date established. Northeast of the new project Volunteer Pet. Co.'s Tar Creek No. 3, sec. 28-5n-19w, is reaming to run casing after bottoming at 780 ft. No formation data is forthcoming.

Oil Workers are War Workers.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Gato Ridge	General Pet. Corp., Wickenden	2	24, 8-32	5189	Redrilled 4310 —Testing
Lompoc	Alphonzo E. Bell Corp., Lompoc	7	28, 8-34		Rig
Los Olivos	Hub Oil Co., La Laguna	1	7, 7-30		Rigging up
Purisima Hills	Whittier Assoc., Barham	1	11, 7-32	2205	Drilling
	Ventura County				
Bardsdale	San Marino Oil Co., Elkins	1	7, 3-19		Rig
Conejo	L. A. Basin Oil Co., Well	1	4, 1-20	1746	Pumping
Eureka Canyon	El Rika Oil Co., Well	4	33, 4-18	430	Drilling
Fillmore	Standard O. Co., Fillmore Comm.	2-1	24, 4-20		Rigging up
Oxnard	E. F. Delaney Todd	1	6, 1-21		Location
Piru	Continental Oil Co., Holser	2	14, 4-18	7979	Testing
	Delroy Pet. Corp., Lisk	3	22, 5-18	2808	Idle
	Pac. West. O. Corp., Temescal	14	4, 4-18	7059	Drilling
	Standard Oil Co., Crestmont	1	14, 4-18	1992	Drilling
Rincon	Shell Oil Co., Inc., Tomson	1	8, 3-24	9704	Suspended
Sespe	Volunteer Pet. Co., Tar Creek	3	28, 5-19	780	Reaming
South Mt.	F. E. Fairfield, S. M.	1	19, 3-20	2750	Rigging up
Timber Canyon	A. T. Dennison, Well	1	13, 4-21	2202	Bailing
Torrey Canyon	Union Oil Co., Torrey	60	5, 3-18	423	Drilling

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Contra Costa	Cal-Bay Corp., Faria	1	21, 2n-1w		Prep. to spud
	Standard Oil Co., Keller	1	26, 2n-1e		Rigging up
	Trico O. & G., Trico-Signal	1	4, 2n-3e		Drlg. water well
Glenn	Superior Oil Co., Dodge Land	2	7, 19n-1e	1395	Drilling
Monterey	Columbia Oil Co., Vierra	1	7, 13s-2e		Rig
	Royalty Service Corp., Federal	1	21, 24s-10e		Grading
Sacramento	Amerada Pet. Corp., Capital Co.	1	36, 5n-5e	8367	Drilling
	Jergins Oil Co., McCormack	1	30, 5n-5e	5195	Drilling
San Joaquin	Amerada Pet. Corp., Lodi Com.	10-1	10, 4n-7e	4495	Completed
	Amerada Pet. Corp., Comm.	15-1	15, 4n-7e		Location
	Amerada Pet. Corp., Comm.	16-1	16, 4n-7e		Location
	Bankline Oil Co., Comm	22A-1	22, 4n-7e		Rigging up
	Standard Oil Co., Holt Comm.	1	15, 1n-5e		Grading
Solano	Amerada Pet. Corp., Starkey Fee	1	2, 6n-2e	9434	Idle
	Standard Oil Co., Honker Comm.	1A	25, 3n-1w		Prep. to spud
	Standard Oil Co., Suisun Comm.	3	5, 3n-1w		Location
Sutter	Shell Oil Co., Inc., Buttes Comm.	1	2, 15n-1e		Rigging up
Tehama	The Texas Co., Walbridge	1A	32, 28n-2w	1544	Drilling

Jack Harpster and Geo. Tinsley, J. H. Marion operations, watch with satisfaction another of their good 5 Points Area completions.

East Purisima Hills Try Nears Objective

Whittier Associates Barham No. 1, sec. 11-7n-32w, is nearing the Miocene Contact below which production is hoped. With the top expected near 2400 ft. the well was last reported below 2200 ft. in hard oil stained gray Sisquoc claystone.

Conejo Wildcat Still on Trial

Los Angeles Basin Oil Co.'s well No. 1, on sec. 4-1n-20w near Conejo, is still perforating and testing. Bottomed at 1746 ft. the well has been punched and proved barren in several intervals. Latest to be tried is 1265-95, 1600-20 & 1580-90 ft. with the returns thus far only water with slight traces of oil.

Piru Deep Try Shows Oil Sand

Continental Oil Co.'s second Holser well cemented 5½ in. casing for trial of good oil showings. Located on sec. 14-4n-18w the well bottomed at 7979 ft. after coring good oil sand in the interval 7854-7882 ft. and only faint oil sand from 7902 to 7930 ft. At press-time no perforations had been made.

On another portion of the section Standard Oil Co.'s Crestmont No. 1 is drilling ahead at 1992 ft. in fractured brown shale showing dead tar sands. Topped at 1491 ft. the zone has twice been tested to recover only mud with slight traces of gas.

In the Temescal producing sector on section 4 Pacific Western Oil Corp.'s "adjacent to production deep try", No. 14, is coring hard gray sand at 7059 ft.

Cat Canyon Wells in Chert

The two drillers in the Cat Canyon field of Santa Barbara county are each drilling in the Chert zone. Deepest is Union Oil Co.'s Bell No. 17, sec. 36-9n-33w, which was last reported at 5454 ft. after topping the Miocene at 4589 ft. In the same section the other, Pacific Western Oil Corp.'s Los Alamos No. 22, is making hole at 5216 ft. after entering Miocene at 4260 ft. Standard Oil Co. has not yet started its Los Flores No. 6 on section 28 of the township.

Rincon Wildcat Standing Idle

Shell Oil Co., Inc.'s Tomson No. 1, immediately north of the Rincon field on sec. 8-3n-24w, is suspended at 9704 ft. The test bottomed in hard shale after coring hard gray sand with steep dips near bottom.

In the field C.C.M.O. Co. is rigging gas lift for No. B-25 after redrilling to 4600 ft. and swabbing good oil and mud. The company plans several additional redrills here and has three new wells on its immediate drilling list.

Honolulu Oil Corp.'s Whitten Permit No. 56-5, drilled from the pier, is cementing between zones after a flow test of both upper and lower sands returned oil with large cuts of salt water.

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San Joaquin Valley

McVan Wildcat Rigging Pump

Pacific Western Oil Corp. Enas Fee No. 6, sec. 21-27s-27e in the McVan area, is rigging pump after running liner including 45 ft. of perforation opposite sands above the plug at 2170 ft. The well bottomed at 3257 ft. after finding the barren Olcese at 3215 ft. and finding oily silt formation wet in the interval 1945-65 ft. on the way down.

Richfield Starts North Belridge Try

Richfield Oil Corp. is drilling Belridge No. 4 on fee owned lands in sec. 21-27s-20e in search of the deep Lower Miocene produced in the North Belridge field. Located slightly northwest of present field limits the well was last reported drilling at 3175 ft. after cementing 1280 ft. of 13⅜ in. surface casing. According to present limited geologic knowledge the top of the zone should be encountered near the 8000-ft. level.

Greeley Work Now Increasing

Activity in the Greeley field, central San Joaquin Valley, which has been slack for the war interim, is now on the upbeat. In the northwesterly field section General Pet. Corp. has rig up for Mitchell No. 3 and Superior Oil Co. is drilling Lewis No. 3 at 11,185 ft. just over the Vedder zone. In the southeasterly field area the Standard Oil Co. is drilling Wegis Comm. No. 1 for a look at possibilities on sec. 21-29s-26e. On section 18 of the township the company completed KCL No. 11-37 flowing under wraps 856 bbls. of clean 36 gravity oil and a half million cubic feet of gas through a 16/64 orifice. The company is also drilling KCL No. 11-38 in section 19 at the southwesterly field flank.

Most interesting of the work is Standard Oil Co.'s re-entry into the abandoned KCL No. 12-6, a mile and a third southwest of the true field limits. This well was bottomed near the center of section 30 at 11,942 ft. and completed in July, 1939, for a potential flow of 4214 bbls. per day with a cut of only 6.9% fresh water. Unfortunately the cut increased steadily and efforts to shut off the water failed making an abandonment necessary in January of the following year. Currently recementing the shoe of 7 in. casing at 11,898 ft. the company proposes to deepen the well for a look at underlying sections.

Fifth Guijarral Well Under Way

R. S. Lytles second Guijarral Hills well No. 86-20F, sec. 20-20s-16e and fifth well drilled in the new producing area, is cementing surface pipe after reaching 607 ft. Located due north of discovery on a line with the field's two producers the well should assist in delineating the contour of this so far confused picture. Standard Oil Co., discoverer of the new shore-line, has already proved the field barren one location west of its initial well thus reasonably establishing central westerly limits. The company's third well in the area, P. V. No. 28-21F, east of present production, was last reported at 8799 ft. in hard brown carbonaceous shale with streaks of fine grained sand showing cuts and gasoline odor. This well is running slightly lower than its predecessors and has not yet been definitely placed in the section. The current drilling should assist in clarifying the contours of the yet undefined shore-line accumulation.

Raisin City Test To Spud

Seaboard Oil Co., operator for the joint test Seaboard-Tide Water-Union No. 53-14, moved in a portable drilling rig and should be under way immediately. The wildcat is located near the center of sec. 14-15s-17e approximately a mile west of the present limits of the not too satisfactory Raisin City field.

Richfield Again Works Tejon Ranch

Richfield Oil Corp., holder of tremendous acreage in the southerly San Joaquin Valley, is continuing its full size hole drilling program in the Grapevine area. Many coreholes have been put down to check stratigraphy and thus far the company has drilled several deep tests without success. The latest try, for which rig is up, is Tejon No. 4 east of the Grapevine Pool on sec. 34-11n-19w.

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
	Fresno County				
Chowchilla	Pure Oil Co., Gamboni	1	28, 10-13	6429	Abandoned
Huron	G. P.-Pure Oil Co., Sopac	81-9	9, 17-17	6475	Drilling
Jacalitos	Standard Oil Co., Well	67-17E	17, 21-15		Rig
Guijarral Hills	Standard Oil Co. P.V.	28-21F	21, 20-16	8715	Drilling
	R. S. Lytle, Well	86-20F	20, 20-16		Rigging up
Raisin City	Seaboard Oil Corp., S.T.U.	53-14	14, 15-17		Rigging up
	Kern County				
Antelope Hills	E. B. Hall Co., Theta	17-56	17, 28-20	1833	Abandoned
Buttonwillow	The Texas Co., Bowerbank U.	3-8C	8, 29-24		Rig
Comanche Point	T. W. Burnham, Chiquita	2	34, 12-19	1972	Idle
Cymric	Honolulu O. Corp., Fitzgerald	32A-26	26, 29-21	3953	Idle
Dyer Creek	D. D. Dunlap, Dyer Creek	1	11, 26-27	2294	Bailing
Devils Den	Etienne Lang, Occidental	3-SW-29	29, 26-19	3590	Drilling
Elk Hills	Pac. West'n & G.F. Getty, McNeil	1	22, 30-24		Location
Grapevine	Richfield Oil Corp., Tejon	4	34, 11-19		Rig
Kern River	R. M. Kiesau, Opr., Kiesau	1	24, 28-28	1010	Drilling
McClung	Continental Oil Co., KCL	G-1	4, 30-26		Rig
McKittrick	Haddock, T. J. & J. E., Akern	1	24, 29-20	2370	Drilling
	Standard Oil Co., Well	89-7	7, 30-22		Location
McVan	Pac. Western Oil Corp., Enas Fee	6	21, 27-27	3257	Testing
Round Mt.	Gen. Pet. Corp., Bradford	1	15, 28-28		Rigging up
	Harp & Brown, Olcese	1	17, 28-29	795	Drilling
	Palomar Ref. Co., Russell	1	6, 28-29	1475	Drilling
	Kings County				
Hanford	The Texas Co., Souza	14-33	33, 17-22	3752	Drilling

Helm-Riverdale Fields Linked

The interval lying between the Helm and Riverdale fields of Fresno county, each of which was discovered by Amerada Pet. Corp., seems to have been proved a continuous producing structure by current completions. First to prove the interval was Superior Oil Co.'s Kreyenhagen No. 81-22 in sec. 22-17s-18e, which completed at 6858 ft. early this month to be followed this week by Amerada Pet. Corp.'s Wheatville Ranch No. F-21-8 on section 8 near the town of Wheatville. Bottomed at 8233 ft. in barren Eocene the well was plugged at 7800 ft. and completed in the lower Miocene flowing a 1037 bbl. daily rate of clean 37.5 gravity oil and 586,000 cu. ft. of gas through an 18/64 in. bean. The company is starting another adjacent well at once.

In the Helm portion of the huge area work is curtailed with only Amerada's Shultz No. F23-36 at work near 6200 ft. In the Riverdale area, however, the company is carrying on a large scale development program with four strings continuously at work.

Union Oil Starts At Torrey Canyon

Union Oil Co. spudded Torrey No. 60 on sec. 5-3n-18w and was last reported in grass-root stages on its way to the Lower Sespe zone. This old shallow field lies about three miles south of the town of Piru in Ventura county.

Tide Water Assoc. Working At Strand

Tide Water Assoc. Oil Co. is starting KCL No. E-4-7 near the center of the Strand field. At the easterly field flank, where geologic disturbances have been noted, the company recompleted KCL No. E-46-7 after deepening from its former producing level at 8374 ft. to a barren 8535 ft. and plugging to 8250 ft. Gun perforated in a solid 7 inch string with 4 holes at 8200 ft. and 8 holes in the interval 8221-23 ft. the well came back in flowing 140 bbls. of clean 37 gravity oil and 82,000 cu. ft. of gas through an 18/64 in. bean.

San Joaquin Valley Leads

The San Joaquin Valley fields, which offer more immediately suitable acreage to the drill than any other producing sector of the state, are steadily increasing the numbers of working projects. Predicated on an immediate necessity for heavy oil at relatively shallow depths to avoid dangerous steel expenditures, the current drilling program covers almost every shallow field in the area. Midway-Sunset, Coalinga, Belridge, Poso Creek, Round Mountain, etc., begin to assume the drilling aspect of the boom days which every oil man remembers so well.

Former Tide Water Man Now Paratrooper

Larry A. Braden, former Tide Water Assoc. Oil Co. engineer at Ventura, has been raised to the rank of Major in the Paratroops. Currently stationed at Fort Banning for advanced maneuvers, Major Braden was formerly an instructor at Camp Roberts where he served as training officer since being called to duty early in the war.

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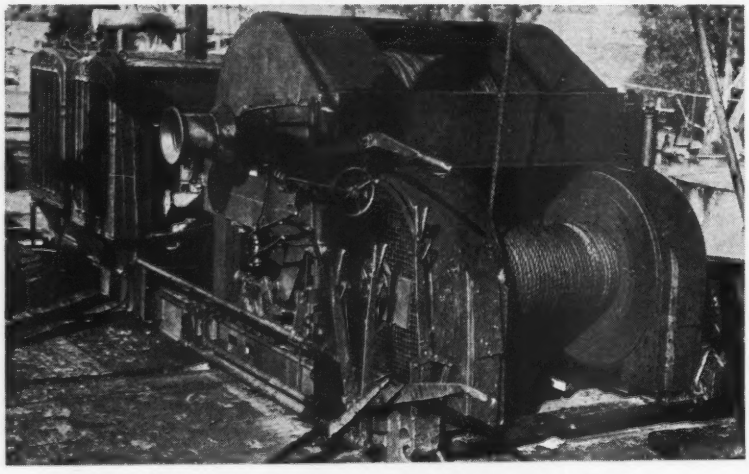

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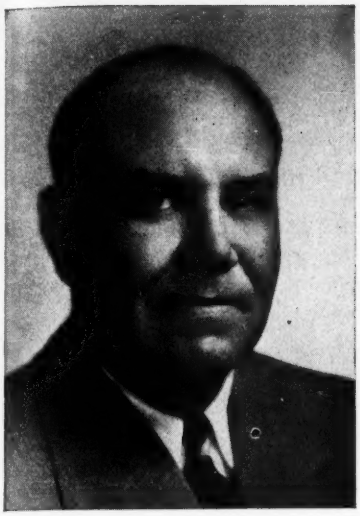
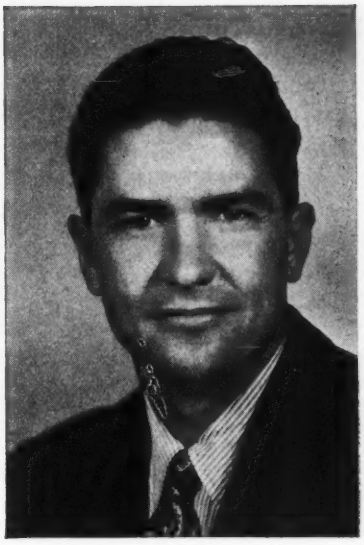


Frank Champion

O. W. Morgan, Jr.



Garth F. Nicolson

Byron Jackson Announces Personnel Changes

The Oil Tool Division of Byron Jackson Co. announces the appointment of O. W. Morgan, Jr., as Sales Manager, effective early in June, 1943. "Ox" Morgan, as he is known to his many friends in the petroleum industry, has a background of several years in various offices of the company. He will make his headquarters at Los Angeles.

Garth F. Nicolson has been promoted to the combined position of Works Manager and Chief Engineer of the Oil Tool Division following many years of engineering and research work.

Terminating eleven years of service with Byron Jackson Co., Frank Champion has resigned as Vice President and General Manager of the Oil Tool Division, but will serve as a Director of the company. Mr. Champion now is associated with Glenn H. McCarthy, as General Manager of Drilling and Production operations, and will maintain his offices and residence at Houston.

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"Robot" Control Furnishes Split-Second Timing In Processing Plants

A "robot" control which opens and closes dozens of valves with split-second timing now controls processing in many of the nation's plants producing aviation gasoline, butadiene for synthetic rubber, and toluene for explosives, according to B. M. Mills, of the petroleum and chemical section of General Electric's industrial engineering department.

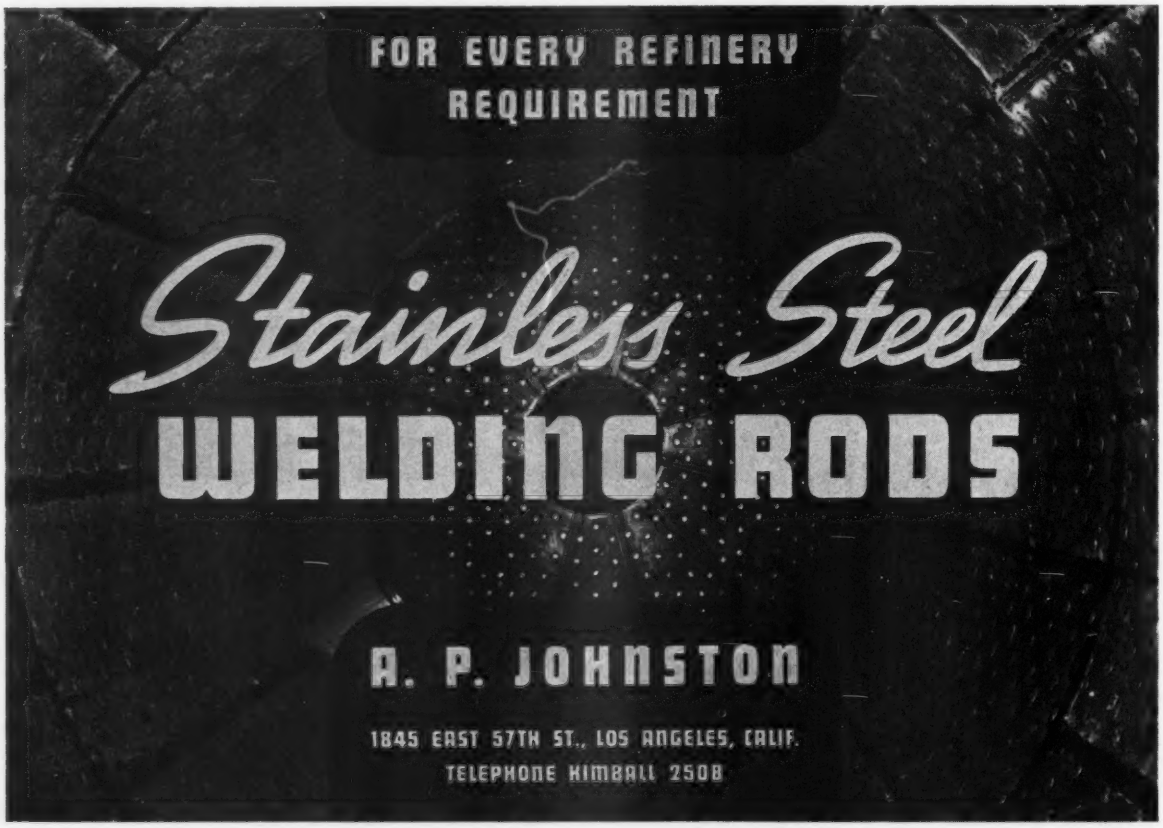
In such plants steam, air, and hot gases flow intermittently through a complex system of piping and tanks. These gases must follow each other at predetermined intervals, and any error in timing or route of flow would slow up production not only through loss of materials but possible damage to equipment.

"The processing might be compared to the job of scheduling, dispatching, and regulating trains on a congested railroad system," Mr. Mills said. "One small error can tie up railroad traffic for hours, possibly resulting in collisions which would damage both trains and goods in transit.

"The General Electric 'robot' control performs the same functions in gasoline, butadiene, and toluene plants as dispatchers and switchmen do in a railroad system. In many of these plants, even if required numbers of skilled operators were available, it would be humanly impossible for them to open and close the numerous valves with the precise timing provided by the 'robot' control, consisting of automatic cycle-timers and valve control.

"The 'robot' controls the flow with machine-like precision, minimizing the possibility of human error. If something goes wrong, such as a valve sticking open or shut, the control even voices a warning—it summons an operator by blowing a horn, or ringing a bell."

The operator's section of the 'robot' consists of a long control panel somewhat resembling the main switchboard in a telephone exchange. Covered with banks of switches, dials, lights, and other indicators, it is the focal point for valve control. When a valve is opened or closed, a light on the board goes on. If any valve should fail to open or close, the board would automatically suspend further operations and sound the alarm for an operator. A glance at the board would give the operator the trouble location and he could arrange for quick repairs.

Before the war this equipment was developed principally to produce high octane gasoline for planes and cars. Because the same methods may be used in producing butadiene and toluene, the robot is now widely used in these two types of plants as well. Plans for extension to other types of plants requiring precise timing or valve control are also under way.

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